

1. *Chlorophyll a* (Chl a) is the primary photosynthetic pigment in most plants and algae. It is a green pigment that absorbs light energy in the blue and red regions of the visible spectrum. Chl a is essential for the light-dependent reactions of photosynthesis, where it converts light energy into chemical energy in the form of ATP and NADPH.

2. *Chlorophyll b* (Chl b) is an accessory pigment found in higher plants and green algae. It is a yellow-green pigment that absorbs light energy in the blue and red regions of the visible spectrum. Chl b transfers the absorbed energy to Chl a, which then uses it for photosynthesis.

3. *Carotenoids* are a group of pigments that include carotenes and xanthophylls. They are responsible for the yellow, orange, and red colors seen in autumn foliage. Carotenoids absorb light energy in the blue and green regions of the visible spectrum and transfer the energy to Chl a. They also play a role in protecting the photosynthetic apparatus from damage by reactive oxygen species.

4. *Xanthophylls* are a subclass of carotenoids that are responsible for the yellow color of autumn foliage. They absorb light energy in the blue and green regions of the visible spectrum and transfer the energy to Chl a. Xanthophylls also play a role in protecting the photosynthetic apparatus from damage by reactive oxygen species.

5. *Anthocyanins* are water-soluble pigments that are responsible for the red, purple, and blue colors seen in autumn foliage. They are not involved in photosynthesis but are produced by the plant in response to environmental factors such as low temperatures and high light intensity.

6. *Flavonoids* are a large group of pigments that include flavones, flavonols, and flavanols. They are responsible for the yellow, orange, and red colors seen in autumn foliage. Flavonoids absorb light energy in the blue and green regions of the visible spectrum and transfer the energy to Chl a. They also play a role in protecting the photosynthetic apparatus from damage by reactive oxygen species.

7. *Anthoxanthins* are a group of pigments that are responsible for the white and yellow colors seen in autumn foliage. They are not involved in photosynthesis but are produced by the plant in response to environmental factors such as low temperatures and high light intensity.

8. *Anthocyanins* are water-soluble pigments that are responsible for the red, purple, and blue colors seen in autumn foliage. They are not involved in photosynthesis but are produced by the plant in response to environmental factors such as low temperatures and high light intensity.

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A Nasal Mask and Mask Cushion Therefor

5 A nasal cushion (30) comprises a substantially triangularly shaped frame (32) from which extends a membrane (34). The frame (32) has a scalloped edge (36) by which the cushion (30) is affixed to a mask body. The membrane (34) has an aperture (38) into which the wearer's nose is received. The membrane (34) is spaced away from the rim (40) of the frame (32), and its outer surface (41) is of substantially the same
10 shape as the rim (40). Respective notches (42,44) receive the bridge of the wearer's nose. The wearer's nose is received through the aperture (38) into the chamber within the mask body (46). The seal forming portion (45) thus contacts both the surface of the wearer's nose and a portion of the wearer's face in the region between the base of the nose and the upper lip, and around the sides and over the bridge of the nose. The
15 shape of the seal forming portion (45) is particularly suited to effectively seal the difficult region of the facial contour that is the crease between the sides of the nose and the face.